In the Specification:

Please replace paragraph 70, as follows:

[0070] One exemplary process of depositing a ruthenium layer by atomic layer deposition a substrate (*e.g.,* 300 mm), in the process chamber 80 of Figure 2, comprises providing pulses of a ruthenium-containing compound, such as bis(2,4-dimethylpentadienyl)ruthenium ~~$(Me_2Cp)_2Ru$~~, from gas source 138 at a flow rate between about 0.01 sccm and about 5 sccm, preferably between about 0.1 sccm and about 1 sccm, through valve 142A for a pulse time of about 1.5 seconds or less, such as about 0.1 seconds or less, and as low as about 0.05 seconds or less due the smaller volume of the reaction zone 164 (as compared to chamber 8 of Figure 1). Pulses of a reducing gas, such as diborane (B_2H_6), may be provided from gas source 139 at a flow rate between about 1 sccm and about 80 sccm, preferably between 10 sccm and about 50 sccm, through valve 142B for a pulse time of about 2 seconds or less, about 1 seconds or less, or about 0.1 seconds or less due to a smaller volume of the reaction zone 164. An argon purge gas at a flow rate between about 500 sccm and about 5,000 sccm, preferably, between about 1,500 sccm and about 3,500 sccm, may be continuously provided from gas source 140 through valves 142A, 142B. The time between pulses of ~~$(Me_2Cp)_2Ru$~~ bis(2,4-dimethylpentadienyl)ruthenium and B_2H_6 may be about 0.5 seconds or less, such as about 0.1 seconds or less, and as low as about 0.07 seconds or less due to the smaller volume of the reaction zone 164. It is believed to fill a reaction zone with a reactant gas and/or purge gas, pulse times as low as about 0.016 seconds are sufficient, with correspondingly shorter pulse times for a reaction zone 164 sized for smaller wafers (*e.g.,* 200 mm). The heater temperature preferably is maintained between about 200°C and about 400°C, preferably about 350°C at a chamber pressure between about 1.0 and about 10 Torr, preferably about 4 Torr. This process provides a ruthenium layer in a thickness between about 0.5 Å and about 1.0 Å per cycle. The alternating sequence may be repeated until a desired thickness is achieved.